



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/548,648	04/13/2000	Zeling Cai	ORT1224	6532

7590 08/01/2005

JANET E. REED  
WOODCOCK WASHBURN LLP  
ONE LIBERTY PLACE 46TH FLOOR  
PHILADELPHIA, PA 19103

EXAMINER

EWOLDT, GERALD R

ART UNIT	PAPER NUMBER
----------	--------------

1644

DATE MAILED: 08/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/548,648

**Applicant(s)**

CAI ET AL.

**Examiner**

G. R. Ewoldt, Ph.D.

**Art Unit**

1644

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3 and 5-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3 and 5-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 1644

#### DETAILED ACTION

1. Claims 1, 3, and 5-7 are pending and being acted upon.
2. Applicant's remarks, filed 5/27/05, are acknowledged.
3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1, 3, and 5-7 stand rejected under 35 U.S.C. § 112, first paragraph, as the specification does not contain a written description of the claimed invention, in that the disclosure does not reasonably convey to one skilled in the relevant art that the inventor(s) had possession of the claimed invention at the time the application was filed. This is a new matter rejection.

As set forth previously, The specification and the claims as originally filed do not provide support for the invention as now claimed, specifically:

A method for the detection of antigen specific T cells, comprising:

- a. providing a recombinant cell expressing an MHC class I protein-fluorescent protein fusion molecule or a radiolabeled MHC class I protein on a surface of the recombinant cell;
- b. contacting the MHC class I protein-fluorescent protein fusion molecule or the radiolabeled MHC class I protein, bound to a specific antigen with a population of T cells;
- c. incubating the fusion molecule or the radiolabeled MHC class I protein bound to the specific antigen together with the population of T cells for a period of time sufficient for the T cells to internalize the fusion molecule or the radiolabeled MHC class I protein from the T cell surface; and
- d. identifying the T cells that have internalized the fusion molecule or the radiolabeled MHC class I protein (Claim 1).

Page 5, lines 8-10 of the specification disclose, "L<sup>d</sup>-GFP expressing cell lines were used as antigen presenting cells (APCs) to present specific QL9 peptide (7) to CD8<sup>+</sup> T-cells from the 2C TCR transgenic-mouse line (2C T-cells), which specifically recognize the T-cell antigen QL9 (8)." It is unclear how this disclosure supports the method as now claimed.

A review of the application shows that the generic method of the original claims comprised a method for the purification of T cells comprising contacting T cells with an MHC class I protein associated with a specific antigen. The newly claimed limitation of part a) of Claim 1, providing a recombinant cell expressing an

Art Unit: 1644

MHC class I protein-fluorescent protein fusion molecule or a radiolabeled MHC class I protein on a surface of the recombinant cell was not present in the original claims. Accordingly, support for the new limitation to the generic claim must be found in the specification.

A review of the specification reveals little generic disclosure of the invention. The specification consists generally of the same teachings as the newly submitted Huang et al. (1999) reference, i.e., specific experiments employing a specific cell type, specific recombinant MHC class I constructs, and a specific antigen. Such a disclosure is insufficient support for the generic method of the claims, i.e., a method employing any recombinant cell, any recombinant MHC class I construct, and any antigen.

Applicant's remarks, filed 5/27/05, assert that support for Claim 1 can be found at pages 1, 4, and 5 of the specification.

A review of the specification shows that it discloses a method of detecting antigen specific T cells (page 1), however, said method is not disclosed in a context employing a generic "recombinant cell" expressing a generic MHC Class I-green fluorescent protein (GFP) fusion molecule or radiolabeled MHC Class I. The specification discloses only the method employing specific *Drosophila* cell lines (see Cai et al. PNAS, 1996), expressing specific MHC Class I L<sup>d</sup>-GFP vectors, presenting specific antigens, e.g., QL9 peptide (pages 4-5).

5. No claim is allowed.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Gerald Ewoldt whose telephone number is (571) 272-0843. The examiner can normally be reached Monday through Thursday from 7:30 am to 5:30 pm. A message may be left on the examiner's voice mail service. If attempts to reach the examiner by

Art Unit: 1644

telephone are unsuccessful, the examiner's supervisor, Christina Chan can be reached on (571) 272-0841.

8. **Please Note:** Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
1/26/08

G.R. Ewoldt, Ph.D.  
Primary Examiner  
Technology Center 1600